



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,585	02/19/2004	Herve Marche	034299-567	7714
7590 09/15/2009				
Robert E. Krebs Thelen Reid & Priest LLP P.O. Box 640640 San Jose, CA 95164-0640			EXAMINER GARCIA, ERNESTO	
			ART UNIT 3679	PAPER NUMBER
			MAIL DATE 09/15/2009	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/783,585

Applicant(s)

MARCHE, HERVE

Examiner

ERNESTO GARCIA

Art Unit

3679

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5.7-11 and 19-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5.7-11 and 19-25 is/are rejected.
- 7) ☒ Claim(s) 5.22 and 25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 August 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "36" has been used to designate both a suspended structure with a first configuration (Figure 1) and another suspended structure with a second configuration (Figure 2). Note that Figure 2 rather shows a clevis.

Claim Objections

Claim 21 is objected to because of the following informalities:

regarding claim 21, --the-- should be inserted after "forming" in line 18.

Appropriate correction is required. For purposes of examining the instant invention, the examiner has assumed these corrections have been made.

Claim Rejections - 35 USC § 112

Claims 5, 20-22, and 25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 5, the recitation "the second spherical surfaces" in line 4 lacks proper antecedent basis.

Regarding claim 20, the recitation "adapted to be installed" in line 6 makes unclear whether the first parts are installed in the suspended structure or not to render being an articulated junction device and not merely a category of parts listed. The same problem applies to the second part in line 8, that is, is the second part installed in the load bearing structure or not?

Regarding claim 21, the same discrepancies as applied to claim 20 apply.

Regarding claim 22, the recitation "unable to rotate with respect to one another about the third axis" in lines 13-14 makes unclear what structure enables preventing anti-rotation when no "rotation prevention means" has been set forth in the claim as found in claim 19 or claim 23. Are the circular members being claimed immobile while excluding those that a torque is applied on the circular members? For purposes of this Office action, the examiner has considered the rotation prevention means being recited as the means to prevent the first and second circular member unable to rotate with respect to each other.

Regarding claim 25, the metes and bounds of the claim is unclear. In particular, it is unclear how the first circular member and the second circular members are configured to cooperate as claimed.

Claim Rejections - 35 USC § 102

Claim 20 is rejected under 35 U.S.C. 102(b) as being anticipated by Yoshioka, 4,026,572.

Regarding claim 20, as best understood, Yoshioka discloses, in Figure 31, an assembly comprising a suspended structure **8**, load bearing structure **1**, a hinge pin **3a**, first parts **4j**, and a second part **4f**. The suspended structure **8** includes two plates **2** parallel to each other. The load bearing structure **1** is coupled to the suspended structure **8** and positioned between the two plates **2**. The hinge pin **3a** having a hinge pin axis **A3** (see marked-up attachment provided in the last Office action). The first parts **4j** are installed in the suspended structure **8** and are able to rotate about a first axis **A1**. The second part **4f** is installed in the load bearing structure and is able to rotate about a second axis **A2**. The hinge pin **3a** passes through the first parts **4j** and the second part **4f**. The first axis **A1** and the second axis **A2** is parallel and offset from each other and the hinge pin axis **A3**. The first and a second parts **4j**, **4f** have one rotatable degree of freedom that is fixed along the hinge pin axis (note that while stationary there is no motion and thus the degree of freedom is temporally fixed). The

first parts **4j** in the plates **2** of the suspended structure **8** cooperate with the plates **2** in the suspended structure **8** through spherical surfaces to define a ball joint connection therebetween (col. 22, lines 8-11).

Claim Rejections - 35 USC § 103

Claims 7-11 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Swerer, 1,900,081.

Regarding claim 19, Swerer, disclose, in Figures 2 and 4, an assembly comprising a load bearing structure **4**, a suspended structure **1**, and a coupling member **9**. The load bearing structure **5** has a first circular member **8**. The first circular member **8** is able to rotate about a horizontally oriented first axis (note that one merely has to place the assembly in a cellar door that is horizontal to ground, versus being placed in the conventional vertical direction). The first circular member **8** has a first aperture **A1** (see marked-up attachment). The suspended structure comprises two plates **3** (the circular shaped plates) parallel to each other between which the load bearing structure is placed. Each of the two plates **3** have a second a second circular member **7** able to rotate about a common horizontally oriented second axis. Each of the second circular members **7** has a second aperture **A2**. The coupling member **9** is received in the first aperture **A1** and the second aperture **A2**. The coupling member **9** is oriented along a third axis parallel and adjacent to the first axis and the second axis. The first circular

member **8** and the second circular member **7** are unable to rotate with respect to one another about the third axis (the axis along the coupling member **9**). The first circular member **8** and the second circular member **7** are unable to rotate with respect to one another about the third axis. Rotation prevention means (the hexagonal cross section of the coupling member and the holes being hexagonal) is provided between the coupling member **9** and each of the first and second circular members **8**, **7**. The rotation prevention means is configured to prevent any relative rotation therebetween. Given that the assembly would have been placed in the horizontal direction during placing the assembly in a cellar door that is horizontal to the ground versus a door that is placed in the conventional vertical direction, the second axis would have been offset vertically upwards from the first axis. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to place the assembly of Swerer in the horizontal direction so that a cellar door can be opened vertically while at the same time having the same expectation of success, i.e., to prevent the door from sticking to the jamb, or being away from the jamb where catch members cannot operate, as taught by Swerer.

Regarding claim 7, the suspended structure **1** is capable of rotating about at least one of the first axis and the second axis.

Regarding claim 8, the load bearing structure **4** is capable of rotating about at least one of the first axis and the second axis.

Regarding claim 9, the first circular member **8** and the second circular member **7** are not independently moveable (note that they move dependently).

Regarding claim 10, the coupling member **9** is a circular hinge pin **9**.

Regarding claim 11, the first aperture **A1** and the second aperture **A2** are circular (note that the more flats are placed in the same cross-section, the flats will eventually form a substantially circular shape).

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Swerer, 1,900,081, as applied to claims 7-11 and 19, and further in view of Brilmyer, 5,580,201.

Regarding claim 24, Swerer, as discussed, fails to disclose, the rotation prevention means including splines provided between the circular hinge pin and the first and the second apertures. Instead, Swerer teaches, flats as also taught by Brilmyer, Fig. 6. Brilmyer teaches, in Figure 5, the use of splines 48 as an anti-rotation means to prevent a hinge pin from rotating relative to an eccentric part. Therefore, as taught by Brilmyer, it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the flats as the rotation prevention means, to splines to prevent the hinge pin from rotating relative to the first and second circular members **7, 8** found in Swerer.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshioka, 4,026,572, in view of Buch, 3,529,790.

Regarding claim 21, Yoshioka discloses, in Figure 31, an assembly comprising a load bearing structure **4**, a suspended structure **8**, a hinge pin **3a**, first parts **4j**, and a second part **4f**. The suspended structure has two plates **2** parallel with one another. The load bearing structure **5** is coupled to the suspended structure **8** and positioned between the two plates **2**. The first parts **4j** are rotatable about a first axis **A2**. The second part **4f** is rotatable about a second axis **A1** (see marked-up attachment provided on 9/30/08). The first parts **4j** are in the plates **2** and cooperate with the plates with the suspended structure **8** through spherical surfaces (col. 22, lines 8-11). The hinge pin **3a** has a hinge pin axis **A3**. The first axis **A2** and the second axis **A1** are parallel and offset from each other and the hinge pin axis **A3**. The first and second parts **4j**, **4f** have one rotatable degree of freedom that is fixed along the hinge pin axis (note that while stationary there is no motion and thus the degree of freedom is temporally fixed). However, Yoshioka fails to disclose intermediate parts forming ball joint cages fixed in each of the two plates of the suspended structure and having internal spherical surfaces cooperating with external spherical surfaces of the second circular members.

Buch teaches, in Figure 4a, intermediate parts **64** forming ball joint cages fixed in each of the two plates of a suspended structure and having internal spherical surfaces

cooperating with external spherical surfaces of second circular members **66** to retain the second circular members, i.e., the spherical circular members, in pivotal contact rather than being in direct spherical contact with the two plates. Therefore, as taught by Buch, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide additional intermediate parts forming ball joint cages fixed in each of the two plates of the suspended structure of Yoshioka to retain the second circular members in pivotal contact with intermediate parts rather than being in direct contact with the two plates as suggested by Yoshioka.

Claim 23 is rejected under 35 U.S.C. 102(b) as being anticipated by Douglas, EP-16270, in view of Sugiyama et al., 4,726,603.

Regarding claim 23, Douglas discloses, in Figure 15, an assembly comprising a load bearing structure **75**, a suspended structure **75**, and a coupling member **50**. The load bearing structure **75** has a first circular member **72** able to rotate about a horizontally oriented first axis **A1** (see marked-up attachment). The first circular member **72** has a first aperture **A4**. The suspended structure **75** has a second circular member **73** able to rotate about a horizontally oriented second axis **A2**. The second circular member **73** has a second aperture **A5**. The coupling member **50** is received in the first and second apertures **A4**, **A5** to couple the suspended structure to the load bearing structure with the first axis **A1** adjacent to the second axis **A2**. The coupling member being oriented along a third axis **A3** parallel and adjacent to the first axis **A1**

and the second axis **A2**. The first and second circular members **72, 73** are unable to rotate with respect to one another about the third axis **A3** (note that the clamping screw force prevents the first and second circular members from moving). The second axis is offset vertically upwards from the first axis (note that the third axis can be adjusted in all direction in the Cartesian coordinate system). The first and second circular members **72, 73**, include a spherical outer surface (the ball bearings constitute a spherical outer surface) to define a ball joint connection with corresponding interface surfaces of the load bearing and suspended structures. However, Douglas fails to disclose a rotation prevention means provided between the coupling member **50** and each of the first and second circular members **72, 73** to prevent any relative rotation therebetween.

Sugiyama et al. teach, in Figure 3, Sugiyama et al. teach, in Figure 3, rotation prevention means provided between a first circular member **64** and a second circular member **48** to prevent a coupling member **54** from rotating relative to the second circular member **48** (col. 3, lines 28-32) and to have the coupling member **54** rotate integrally with a first circular member **64** (col. 3, lines 56-59). Therefore, as taught by Sugiyama et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide rotation prevention means between the first circular member and the second circular members so that the second circular member and the first circular member rotate integrally with the coupling member. Given the modification, the first circular member and the second circular member **4j** would have been unable to rotate with respect one another about the third axis.

Allowable Subject Matter

Claims 5, 22, and 25 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

regarding claim 5, as best understood, the prior art of record does not disclose or suggest an assembly comprising intermediate parts forming ball joint cages fixed in each of the two plates of the suspended structure (lines 1-3) in combination with rotation prevention means provided between the coupling member and a first circular member and a second circular member (claim 19, lines 20-22). The closest prior art, Douglas, EP-16270, in view of Sugiyama et al., 4,726,603, or Ziech, 6,688,616, would have taught only one plate with a ball joint cage in a suspended structure;

regarding claim 25, as best understood, the prior art of record does not disclose or suggest an articulated junction device comprising second circular members cooperating with the two plates of a suspended structure through a second spherical surface defining a second ball joint connection between the suspended structure and a coupling member (lines 4-6) in combination with a suspended structure having two parallel plates (claim 19, line 10) and rotation preventions means provided between the

coupling member and each of the first and second circular members (claim 19, lines 20-21);

regarding claim 22, the same reasons as stated in claim 25 apply. This claim differentiates in that the claim recites one second circular member instead of two second circular members.

Response to Arguments

Applicant's arguments with respect to claims 5, 7-11, and 19 have been considered but are moot in view of the new grounds of rejection.

Applicant's arguments against claims 20 and 21 and filed June 9, 2009 have been fully considered but they are not persuasive. In particular, it should be noted that claims 20 and 21 do not have any mention of any rotation prevention means and thus the argument is not commensurate with the scope of claims 20 and 21. Further, it should be noted that claims 20 and 21 do not state that the second part cooperates with the load bearing structure through spherical surfaces as well as the second parts have been recited to do. Accordingly, the passage "the spherical surfaces can be provided between the eccentric member and the loaded housing or between the eccentric member and the support housing" in the reference, as relied by the applicant, does not overcome the rejection of claims 20 and 21.

Conclusion

The following prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Reilly et al., 5,779,260, as modified by Sugiyama et al., 4,726,603, also anticipates claim 19 as all the circular members, as taught by Sugiyama et al., contain rotation prevention means.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ernesto Garcia whose telephone number is 571-272-7083. The examiner can normally be reached from 9:30AM-6:00PM. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached at 571-272-7087.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

Art Unit: 3679

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/E. G./

Examiner, Art Unit 3679

September 15, 2009

Attachment: one marked-up page of Douglas, EP-16270

/Daniel P. Stodola/
Supervisory Patent Examiner, Art Unit 3679

